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ABSTRACT

This paper defines and develops the use of instructional objectives in economic education. Such teaching technique is hypothesized to improve economic understanding through improved learning efficiency and evaluation of learning achieved. Instructional objectives are defined and exemplified, both in general literature and specific practice. In addition, the present extent of instructional objective use in economic education is surveyed, and research studies of instructional objective effect are reviewed. Recommendation is made for further research studies of instructional objective effect, for further implementation of instructional objectives in college economics programs, and for organizational (AEA, WEA, JCEE) activity and encouragement. A complete bibliography of instructional objective literature (construction, theory, implementation, research) is provided. (Author)

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INSTRUCTIONAL OBJECTIVES IN ECONOMICS TEACHING: PHILOSOPHY, EFFECT, AND EXTENT OF USE

Economic education, from an optomistic viewpoint, has experienced much progress in recent years, evidenced by accumulating research literature and by increased concern from economists and economics associations. [7,17,19,20] Research studies on various aspects of economic education are now published regularly in The Journal Of Economic Education, and also appear frequently in the American Economic Review. Further, the Joint Council On Economic Education (JCEE) conducts numerous projects to improve economic education, often in cooperation with State Councils and centers for economic education throughout the country.

Granted, then, that economic education has surely progressed and thus improved economic literacy, one may question the frequent concern over instructional (sometimes termed behavioral) objectives. Does not the literature make reference to effective teaching techniques as programmed instruction, television, and simulation gaming? [1,9,18] And has not evaluation of learning been researched from the standpoint of standardized tests (as TEU and TUCE) and value orientations? [11,16,28] Why, then, the concern over instructional objectives?

The importance of instructional objectives for economic education (or for other disciplines) lies both in further increasing the efficiency of teaching technique and in improving the evaluation of economics instruction. [5,27] Thus, concern with instructional objectives does not criticize or detract from research interest in alternative teaching techniques, but would seek to aid such techniques in promoting economic understanding. And evaluation of economic education gains would surely be improved if a more definite benchmark or standard were provided to measure learning

improvement.[6,14,30] On such grounds for improvement of learning, and especially given the economist's interest in efficiency and evaluation of "output" (Ever consider an "isoquant" of economic education with factors of alternative teaching techniques?), an examination of instructional objectives appears warranted and beneficial.[10]

Let us first examine in the following the philosophy and structure of instructional objectives, thus fully defining our subject and indicating areas of use. The following section examines research results of instructional objectives application, as well as surveying instructional objective use in economic education.

Philosophy and Structure of Instructional Objectives

Basically, an instructional objective is a statement of learning expectation to the student. To be more specific, an instructional objective would inform the student as to a.) exactly what he is to learn, b.) how he is to demonstrate such learning, c.) what satisfactory level of performance is required, and d.) a rationale for the learning.[2,5,21,25,27] The following statement may serve to exemplify the definition of an instructional objective:

> The student will, during a 30-minute exam of 10 multiple-choice questions involving shifts of supply and demand market conditions, correctly identify 8 equilibrium price-quantity results. Such identification allows prediction of future market patterns.

Such a statement of learning expectation may appear rather complicated, but let us examine the educational philosophy embodied in such statement, as well as the resulting gains to the student. Note first that the student is specifically informed as to what learning is expected, both in terms of specific content and degree of accuracy. The philosophy is that the instructional process is to promote some learning behavior, and that both instructor and student must be fully aware of such expectation to achieve the desired

result.[5,6,27] Not only is the instructor required to think through and state exactly what learning he attempts to develop, but the student has clear responsibility to master a given body of concepts and applications. Perhaps more bluntly stated, the teaching philosophy is that if a learning goal is desired, that goal must be clearly specified (and, therefore, effort evaluated in terms of achievement), with instructor and student efforts directed towards its achievement.[5,6]

A further requirement (or at least a desirable element) of instructional objective technique is that the instructional objectives be stated in a pattern which approximates the learning process. This means that before the student may apply a concept or theory (as in the previous instructional objective example) he must first identify essential terms and definitions and comprehend basic principles and relationships. The instructional objectives should be stated, therefore, in a "progressive" pattern from simple identification to complex application, analysis, and evaluation.[2,3,5,27] Again, such statement forces the instructor to think through and state the required learning steps, while ensuring student mastery at each learning level.

What are the benefits from such involved statement of instructional objectives? Surely this question must be asked, for a considerable amount of time and effort is required (And any economist would be suspect not to attempt a cost-benefit analysis!), perhaps otherwise spent to develop alternative techniques described in economic education literature. As stated earlier, the benefits of instructional objective statement involve improvement both in teaching efficiency and evaluation of learning.[14,30] An initial benefit is that the instructor is forced (if not already done) to think through exactly what learning his teaching is to promote, how that learning must proceed (the progression from identification

to application), and how to determine if the desired learning is achieved by the student. While this is not an implied criticism of college teaching, a careful analysis of teaching inputs and outputs is often beneficial in clarifying exactly what results from the instructional process. [5,6] Surely there are obvious gains in efficiency and evaluation from the instructor's viewpoint.

Looking at this same instructional objective statement from the student's standpoint, learning efficiency is improved because specification of objectives focuses student effort on essential concepts. "Guessing games" (What will the prof ask on the midterm?) are replaced with definite responsibility to learn specified concepts, and exam questions only require the student to demonstrate pre-stated learning objectives. Further, the student knows his evaluation (grade) results directly from his effort in successfully mastering the learning objectives stated. [2,21]

From both instructor and student viewpoint, then, the use of instructional objectives should promote learning. Efforts expended by both groups should produce more demonstrated learning results, thus greater efficiency. And evaluation of that learning is pre-determined by statement of the instructional objective itself, thus providing a clear-cut indication of achievement. It should be further noted that use of instructional objectives does not preclude the use of other instructional techniques (television, computer, simulation, etc.) described in economic education literature. In fact, the use of instructional objectives together with an instructional approach best tailored to student learning abilities (that is, "individualized instruction") probably maximizes student learning and teaching efficiency. [10,13,15]

Effect of Instructional Objectives
and Extent of Use

Given the previous claims for benefits from use of instructional objectives, one may be justified in asking for research findings which illustrate gains in student learning from such approach. Further, one may ask how widespread is the use of instructional objectives in economic education. Unfortunately (a personal evaluation), the research literature is rather limited as to instructional objective effect, and the use of instructional objectives appears limited and difficult to define. [2,7,8, 24,31] While a brief survey of such use and effect is presented in the following, further study is surely recommended.

Instructional objectives are presently employed in economic education (and other disciplines) at all levels; elementary, secondary, community college, and four-year college and university. [8,24,31] And in some school districts and colleges the instructional objective process is quite thorough, including overall school/grade/college goals, specific instructional objectives in a learning hierarchy, testing procedure based on instructional objectives with remedial learning provision, and even teacher evaluation based on students' learning achievements. [26,31] However, the general use of instructional objectives appears rather spotty and incomplete for economic education, with many instructional objectives poorly stated and evaluation loosely linked to those objectives.

In the author's own survey of community college economics departments (224 responses from 1,023 questionnaires) in 1971, 40.2% replied they now used instructional objectives, and another 30% indicated future use was planned. [26] However, many of the affirmative responses appeared to consider a course outline as constituting specific instructional objectives, and very few (perhaps 5%) employed a complete integration of instructional

objectives, audio-visual/programmed techniques, and evaluation. There does appear to be great demand for preparation (by AEA, WEA, JCEE, etc.) of instructional objectives for economic education, as 87.3% expressed interest in such availability, and 58.3% had some background in writing or working with instructional objectives. [26,30]

In viewing the present use of instructional objectives in economic education, then, there appears to be high and increasing interest in such technique, though much effort is required for widespread, effective implementation. Perhaps wider usage of instructional objectives would be furthered by AEA, WEA, or JCEE projects and encouragement. [30] And perhaps economist inspection of presently-prepared instructional objectives for economic education may generate greater interest and use. [29]

Or perhaps instructional objective employment would increase if numerous research studies reported highly significant learning gains in economic education, such benefit thus justifying the large effort and cost involved. As yet, however, research studies on instructional objective effect (especially in economic education) are both few in number and inconclusive in impact on learning. [8,31] In the author's own research on community college economics students a significant learning gain from instructional objective technique was not achieved (The .06 level attained was short of the .05 level of significance.), although student learning effort did appear more efficiently expended and student apprehension over course requirements did appear reduced. [25] And from a teacher's viewpoint, the required development of specific instructional objectives for economic theory was most "instructive!"

As for other research studies on instructional objective effect on learning achievement, few exist with definite results, particularily in

economic education. [7,20] Significant learning gains from instructional objectives technique were reported for college chemistry students [12], for secondary physical education students [23], and for a variety of other disciplines and levels. [8,31] Further, instructional objectives resulted in reduced student anxiety and learning time in other studies. [8,22] However, it would appear that much further research is required on instructional objective effect before the economic education movement would wholeheartedly adopt the instructional objective approach.

As a summary to this paper, the use of instructional objectives in economic education does appear to promise gains in efficiency of student learning and evaluation. Further, employment of instructional objectives does exist on a scattered basis at present, and a few research studies do suggest significant learning gains. Further effort in both research effect and implementation, then, appears worthwhile. (This is, admittedly, a subjective and personal evaluation.) Those wishing to further pursue instructional objectives in economic education might consult the prepared lists now available [4,29], the bibliographies and research studies of effects [2,5,8,20,31], and the literature describing the process of instructional objectives construction. [5,13,21,27]

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